

a<sup>1</sup>

ii. entry into a living cell in the absence of a receptor that binds to FGF].

19. (Once Amended) A recombinant nucleic acid molecule encoding a chimeric fibroblast growth factor (FGF), comprising:

a. a first isolated nucleic acid sequence encoding a biologically active fibroblast growth factor (FGF) protein; and,

a<sup>2</sup>

b. a second isolated nucleic acid sequence encoding a penetratin peptide that transports said chimeric fibroblast growth factor (FGF) across a lipid bilayer of a cell independently of the presence of an FGF receptor, wherein said second nucleic acid sequence is linked to said first nucleic acid sequence;

wherein said first and second nucleic acid sequences are operatively linked to a transcription control sequence; and,

wherein said chimeric fibroblast growth factor (FGF) is characterized by[:

iii. ]fibroblast growth factor biological activity in the absence of heparan sulfate[; and,

iv. entry into a living cell in the absence of a receptor that binds to FGF].

37. (Once Amended) A method to produce a chimeric fibroblast growth factor (FGF), comprising culturing in an effective medium a recombinant cell comprising a recombinant nucleic acid molecule encoding a chimeric fibroblast growth factor protein, said recombinant nucleic acid molecule comprising:

a. a first isolated nucleic acid sequence encoding a biologically active fibroblast growth factor (FGF) protein; and,

a<sup>3</sup>

b. a second isolated nucleic acid sequence encoding a penetratin peptide that transports said chimeric fibroblast growth factor (FGF) across a lipid bilayer of a cell independently of the presence of an FGF receptor, wherein said second nucleic acid sequence is linked to said first nucleic acid sequence;

wherein said first and second nucleic acid sequences are operatively linked to a transcription control sequence; and,

wherein said chimeric fibroblast growth factor (FGF) is characterized by[:

- A3
- i ]fibroblast growth factor biological activity in the absence of heparan sulfate[; and,
  - ii. entry into a living cell in the absence of a receptor that binds to FGF];

wherein said recombinant cell expresses said chimeric fibroblast growth factor (FGF).

39. (Once Amended) A method to repress terminal differentiation and promote proliferation in a cell, comprising administering to a cell a chimeric fibroblast growth factor (FGF) protein comprising:

- A4
- a. a biologically active fibroblast growth factor (FGF) protein having a first amino acid sequence; and,
  - b. a penetratin peptide having a second amino acid sequence, wherein said penetratin peptide transports said chimeric fibroblast growth factor (FGF) across a lipid bilayer of a cell independently of the presence of an FGF receptor, wherein said second amino acid sequence is linked to said first amino acid sequence;

wherein said chimeric fibroblast growth factor (FGF) is characterized by[:

- v. ]fibroblast growth factor biological activity in the absence of heparan sulfate[; and,
- vi. entry into a living cell in the absence of a receptor that binds to FGF].

42. (Once Amended) A method to enhance a biological process selected from the group consisting of mitogenesis, angiogenesis, wound healing, neurogenesis, limb patterning, limb outgrowth, comprising administering to cells associated with said biological process a chimeric fibroblast growth factor (FGF) comprising:

- A5
- a. a biologically active fibroblast growth factor (FGF) protein having a first amino acid sequence; and,
  - b. a penetratin peptide having a second amino acid sequence, wherein said penetratin peptide transports said chimeric fibroblast growth factor (FGF) across a lipid bilayer of a cell independently of the presence of an FGF receptor, wherein said second amino acid sequence is linked to said first amino acid sequence;
- wherein said chimeric fibroblast growth factor (FGF) is characterized by[: